

**CLAIMS**

- 1 1. Complexes of paroxetine, as free base or as salt, with a cyclodextrin or with a  
2 cyclodextrin derivative.
- 1 2. Complexes as claimed in claim 1 characterised by the form of a flowing powder,  
2 chemical stability, absence of organic solvents, high solubility in water and DSC  
3 profile different from that of the corresponding non-complexed paroxetine or  
4 paroxetine salt.
- 1 3. Complexes as claimed in claim 2 characterised by the absence of ethanol.
- 1 4. Complexes as claimed in claim 1 characterised in that they have a water  
2 content of between 1 and 20% by weight.
- 1 5. Complexes as claimed in claim 4 characterised in that said water content is  
2 between 2 and 15% by weight.
- 1 6. Complexes as claimed in claim 1, characterised in that said cyclodextrin is  
2 selected from the group consisting of  $\alpha$ ,  $\beta$  and  $\gamma$ -cyclodextrin.
- 1 7. Complexes as claimed in claim 6, characterised in that said cyclodextrin is a  $\beta$ -  
2 cyclodextrin.
- 1 8. Complexes as claimed in claim 1, characterised in that said cyclodextrin  
2 derivative is selected from the group consisting of eptakis (2,6-di-O-methyl)- $\beta$ -  
3 cyclodextrin, eptakis (2,3,6-tri-O-methyl)- $\beta$ -cyclodextrin, monosuccinyl-eptakis(2,6-  
4 di-O-methyl)- $\beta$ -cyclodextrin, 2-hydroxypropyl- $\beta$ -cyclodextrin, sulphated cyclodextrin  
5 and cyclodextrin containing aminoalkyl groups.
- 1 9. Complexes as claimed in claim 8, characterised in that said cyclodextrin  
2 derivative is the 2-hydroxypropyl- $\beta$ -cyclodextrin.
- 1 10. Complexes as claimed in claim 1, characterised in that said salt of paroxetine  
2 is a salt with an organic or inorganic acid.
- 1 11. Complexes as claimed in claim 10, characterised in that said organic or  
2 inorganic acid is selected from the group consisting of acetic acid, maleic acid,  
3 hydrochloric acid and methanesulfonic acid.
- 1 12. Complexes as claimed in claim 11 characterised in that said acid is  
2 hydrochloric acid.
- 1 13. Complexes as claimed in claim 1, characterised in that the molar ratio between  
2 paroxetine and said cyclodextrin or cyclodextrin derivative ranges from 1:0.25 to

3 1:20.

1 14. Complexes as claimed in claim 13, characterised in that the molar ratio  
2 between paroxetine and said cyclodextrin or cyclodextrin derivative ranges from  
3 1:0.5 to 1:2.

1 15. Process for the preparation of the complexes as defined in claim 1, comprising  
2 the following steps:

3 (a) paroxetine, as free base or as salt, a cyclodextrin or a cyclodextrin derivative  
4 and water are mixed;

5 (b) the obtained mixture is stirred in order to obtain an homogeneous solution or  
6 dispersion and stirring is continued until formation of the complex; and

7 (c) the water is partially removed in order to obtain a solid complex with the  
8 desired water content.

1 16. Process as claimed in claim 15 characterised in that paroxetine is used as a  
2 free base.

1 17. Process as claimed in claim 15 characterised in that paroxetine is used as a  
2 salt.

1 18. Process as claimed in claim 15 characterised in that step b) is carried out by  
2 mechanical stirring or by ultrasounds.

1 19. Process as claimed in claim 15 characterised in that step c) is carried out by  
2 freeze drying, drying under vacuum or under an inert gas flux.

1 20. Process as claimed in claim 15 characterised in that in step c) a solid complex  
2 with a water content of between 1 and 20% by weight is obtained.

1 21. Process as claimed in claim 20 characterised in that said water content is  
2 between 2 and 15% by weight.

1 22. Process as claimed in claim 16 characterised in that step a) is carried out  
2 according to the following steps:

3 a<sub>1</sub>) a cyclodextrin or a cyclodextrin derivative is added to water;

4 a<sub>2</sub>) the solution or dispersion of step a<sub>1</sub>) is kept under stirring for a time from 30 to  
5 180 minutes at a temperature between 25° and 50°C; and

6 a<sub>3</sub>) paroxetine base is dispersed in the solution or dispersion of step a<sub>2</sub>).

1 23. Process as claimed in claim 17, characterised in that said step a) is carried out  
2 according to the following steps:

3 a<sub>1</sub>) paroxetine base is salified with an organic or inorganic acid; and

4 a<sub>2</sub>) a cyclodextrin or a cyclodextrin derivative is added under stirring to the salified  
5 paroxetine.

1 24. Process as claimed in claim 16 characterised in that step c) is carried out  
2 according to the following steps:

3 c<sub>1</sub>) the dispersion of step b) is cooled and maintained at a temperature between  
4 4°C and 20°C for 1 to 20 hours;

5 c<sub>2</sub>) the precipitate obtained in step c<sub>1</sub>) is recovered by filtration; and

6 c<sub>3</sub>) the solid product recovered in step c<sub>2</sub>) is dried under vacuum or under an inert  
7 gas flux until the desired water content is reached.

1 25. Process for the preparation of complexes as claimed in claim 1 comprising  
2 slowly adding paroxetine base in the form of an oily liquid to a cyclodextrin or to a  
3 cyclodextrin derivative in a mixer for powders or in an ultrasonic mixer and  
4 continuing the stirring for a time ranging from 3 to 24 hours at a temperature from  
5 25 to 50 °C.

1 ~~26. Pharmaceutical compositions containing as an active substance a~~  
2 ~~pharmaceutically effective dose of a complex as defined in claim 1, in mixture with~~  
3 ~~pharmaceutically acceptable diluents or excipients.~~

1 ~~27. Pharmaceutical compositions as claimed in claim 26 in solid or liquid form, for~~  
2 ~~oral and for parenteral administration.~~

1 28. Therapeutical method for the treatment of patients suffering from depression or  
2 Parkinson's disease or other pathologies curable with paroxetine consisting of the  
3 administration of a complex as defined in claim 1, in an amount corresponding to  
4 5-40 mg per day of paroxetine by oral way and corresponding to 1-20 mg per day  
5 of paroxetine parenterally.

add  
A'